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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,687	08/10/2001	Shinichi Minemura	427972000110	5297

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EXAMINER

PRATT, CHRISTOPHER C

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/925,687

Applicant(s)

MINEMURA ET AL.

Examiner

Christopher C Pratt

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-14, 17, 18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-14, 17, 18 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/305,100.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10-14, 17-18, and 21-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 17-18 are indefinite because they contain the phrase "and a layer containing no granular activated carbon on a first surface." This implies that a separate material is added to the sheet when the specification describes a single layered sheet wherein the surface of the sheet has no granular activated carbon. Please amend the claims to more accurately describe the latter embodiment.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-14, 17-18, and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-02135141 in view of Douglas et al (5732718) and Groeger et al (5605746).

JP-02135141 discloses a gas adsorption sheet comprising activated carbon particles having applicant's claimed size, a supporting fiber and a water-swelling

Art Unit: 1771

adhesive fiber (abstract, p. 5). JP-02135141 discloses laminating air permeable reinforcing sheets to said gas adsorption sheet (p. 7). JP-02135141 does not seem to teach a particulate free surface.

Douglas is concerned with the creation of a filter comprising activated carbon and supporting fibers (abstract). Douglas teaches one surface having less than 40% carbon and a second surface having greater than 60% carbon (abstract and fig. 2). It would have been obvious to a person having ordinary skill in the art to utilize the carbon gradient taught by Douglas in the filter of JP-02135141. Such a modification would have been motivated by the desire to allow more air and offensive particulate material to enter the filter before being trapped by the carbon particles. While Douglas teaches that one surface should have less than 40%, it does not specifically teach that the surface should be completely free of particles.

Groeger is concerned with the creation of a particulate filter. Groeger teaches a surface of the filter to be free of particulate material (figs. 2-3). It would have been obvious to a person having ordinary skill in the art to construe Douglas' teaching of "less than 40%" to mean 0%, or one surface free of particulate material. This interpretation, guided by the teachings of Groeger, would lead to a more efficient filter by allowing offensive particulate material to enter into the filter unobstructed, where it can remain trapped.

With respect to claim 12, Douglas teaches the use of electret fibers. It would have been obvious to utilize electret fibers in order to render the filter material more attractive to offensive particles.

With respect to claim 14, JP-02135141 is silent with respect to the density of the material. It would have been obvious to modify the density based on the size of the particles intended to be trapped.

With respect to claims 13, Groeger teaches the use of an additional cover layer. It would have been obvious to utilize this additional layer in order to increase the durability of the filter.

With respect to claims 17-18, JP-02135141 teaches molding and folding the filter (p. 3, 4, and 5), but does not specifically teach what shape the filter is folded into. Groeger teaches end use forms of filters, including pleats (col. 10, lines 30-31). It would have been obvious to a person having ordinary skill in the art to fold or mold the filter into pleated shapes. Such a modification would have been motivated by the desire to increase the surface area of the filter.

With respect to claim 21, JP-02135141 teaches wet bonding with water swelling fibers (p. 8).

JP-02135141 discloses said sheet to act as an air purification filter and to be gas permeable. The exact dimensions of the pores in the sheet do not seem to be taught. It is the examiner's position that the pore area, number, and percent porosity claimed by applicant are inherent in the sheet of JP-02135141 because said sheet performs the same function as applicant's sheet. In the alternative, if these dimensions are not inherent in JP-02135141, then it would have been obvious to the skilled artisan to utilize the pore area, number, and percent porosity claimed by applicant in the sheet of JP-02135141. The skilled artisan would have been motivated to vary the pore area,

Art Unit: 1771

number, and percent porosity by the reasoned expectation of achieving varied absorption properties.

JP-02135141 teaches applicant's claimed supporting fiber dimensions (p. 6).

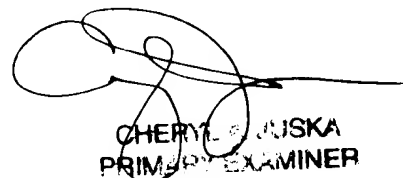
**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Pratt whose telephone number is 703-305-6559. The examiner can normally be reached on Monday - Friday from 7 am to 4 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Christopher C. Pratt  
May 13, 2003



CHERYL JUSKA  
PRIMARY EXAMINER